

### SECTION III—REMARKS

This amendment is submitted in response to the Office Action mailed March 9, 2004, which action the Examiner made final. In this amendment, claims 1, 6, 11, 13, 18, 23, 25, 30, 35, 36, 39, 40, 41, 43 and 44 are amended. Claims 1-44 remain pending in the application. Applicant respectfully requests allowance of all pending claims in view of the above amendments and the following remarks.

#### Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1-7, 11-19, 23, 24, 35-37, 39-42 and 44 as anticipated under 35 U.S.C. § 102(a) by U.S. Patent No. 6,154,489 to Kleider et al ("Kleider"), and rejected claims 1-10, 13-22, 25-32, 35, 38-40, 43 and 44 as anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,611,795 to Cooper ("Cooper"). Applicant respectfully traverses the Examiner's rejections. A claim is anticipated only if each and every element, as set forth in the claim, is found in a single prior-art reference. MPEP § 2131; *Verdegaal Bros. v. Union Oil of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). As explained below, neither Kleider nor Cooper can anticipate the particular claims they are used to reject because they do not disclose every element and limitation recited therein.

Claim 1, as amended, recites an optical communication system comprising, among other things, an optical transmitter including an error correction encoder, wherein the error correction encoder "outputs data that is encoded according to an error correction algorithm selected by the encoder from a predetermined set of error correction algorithms having differing data transfer rates." Neither Kleider nor Cooper discloses a combination including the claimed limitation. Kleider discloses an apparatus and method for adaptive rate-coded digital image transmission in which the apparatus or method uses only a single error correction algorithm; any rate adaptation in Kleider is done by selecting or adjusting the appropriate parameters of the selected single error correction algorithm (*see* col. 7, line 51 *et seq.*). Kleider does not disclose, teach or suggest an apparatus or method in which adaptation is done by selecting a different error correction algorithm based on measured conditions. Similarly, Cooper discloses adaptive forward error correction but does not disclose that any adaptation should consist of selecting among different error correction algorithms; instead, Copper discloses that any given embodiment uses only a single error correction algorithm, and that any adaptation consists of optimizing the performance

of the one chosen algorithm by proper selection and adjustment of the parameters associated with that algorithm (*see* col. 6, lines 27-51, regarding optimization of a Reed-Solomon code). Thus, neither Kleider nor Cooper discloses, teaches or suggests a communication system combination including an optical transmitter with an error correction encoder, wherein the error correction encoder "outputs data that is encoded according to an error correction algorithm selected by the encoder from a predetermined set of error correction algorithms having differing data transfer rates."

Despite the above argument showing that Kleider and Cooper do not disclose every element and limitation of the claim, the Examiner argues that in accordance with standard, accepted terminologies (*i.e.*, the "common knowledge") in the coding art and the computer science art, codes with different  $(n,k)$  parameters are different "error correction codes" having different algorithms and "different data transfer rates." Applicant traverses the Examiner's rejection. First, merely changing the input parameters of an algorithm does not make it a different algorithm; the algorithm remains the same, although the input parameters may affect the result. Second, it is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record as the principal evidence upon which a rejection was based. M.P.E.P. § 2144.03. In this case, the Examiner has made only a conclusory statement alleging that codes with different  $(n,k)$  parameters are different "error correction codes" having different algorithms. The Examiner has not, however, provided any documentary evidence to support this conclusion. Applicant therefore submits that Kleider and Cooper cannot anticipate claim 1 and respectfully requests withdrawal of the rejection and allowance of the claim.

Claim 13, as amended, recites an optical communication system comprising, among other things, "an optical transmitter, wherein the optical transmitter includes error correction encoder means for encoding data according to an error correction algorithm selected by the encoder from a predetermined set of error correction algorithms having differing data transfer rates." As discussed above in connection with claim 1, neither Kleider nor Cooper discloses, teaches or suggests a combination including the recited limitation. Applicant therefore submits that Kleider and Cooper cannot anticipate claim 13, and respectfully requests withdrawal of the rejection and allowance of the claim.

Claim 25, as amended, recites an optical transceiver comprising, among other things, "an error correction encoder, wherein the error correction encoder outputs data that is encoded according to an error correction algorithm selected by the encoder from a predetermined set of error correction algorithms having differing data transfer rates, the predetermined set also including a selection of no error correction encoding." As discussed above in connection with claim 1, Cooper does not disclose, teach or suggest a combination including the recited limitation. Applicant therefore submits that Cooper cannot anticipate claim 25, and respectfully requests withdrawal of the rejection and allowance of the claim.

Claim 35 recites a method for use in an optical communication system comprising measuring a parameter of an optical signal received in the optical communication system and "selecting an error correction algorithm from a predetermined set of error correction algorithms based on the measurement." As discussed above in connection with claim 1, neither Kleider nor Cooper discloses, teaches or suggests a method combination including the recited limitation. Applicant therefore submits that Kleider and Cooper cannot anticipate claim 35, and respectfully requests withdrawal of the rejection and allowance of the claim.

Claim 40 recites an optical communication system comprising, among other things, means for measuring a parameter of an optical signal received in the optical communication system and "means for selecting an error correction algorithm from a predetermined set of error correction algorithms based on the measurement." As discussed above in connection with claim 1, neither Kleider nor Cooper discloses, teaches or suggests a combination including the recited limitation. Applicant therefore submits that Kleider and Cooper cannot anticipate claim 40, and respectfully requests withdrawal of the rejection and allowance of the claim.

Regarding claims 2-12, 14-24, 26-32, 36-39 and 41-44, if an independent claim is allowable, then any claim depending therefrom is also allowable. *See generally* MPEP § 2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, independent claims 1, 13, 25, 35 and 40 are now in condition for allowance, and Applicant submits that claims 2-12, 14-24, 26-32, 36-39 and 41-44 are therefore allowable by virtue of their dependence on allowable independent claims, as well as by virtue of the features recited therein. Applicant therefore respectfully requests withdrawal of the rejections and allowance of these claims.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 33 and 34 under 35 U.S.C. § 103(a) as obvious in view of, and therefore unpatentable over, Cooper. Applicants respectfully traverse the Examiner's rejections on two grounds. First, the Examiner has given official notice that the ease of implementing fast adaptive logic by using FPGA logic was well known at the time the invention was made. It is not appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. M.P.E.P. § 2144.03. Here, the facts the Examiner asserts are well known are not capable of instant and unquestionable demonstration, because the alleged facts pertain to FPGA logic, which is an esoteric area of technology.

Second, if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is also non-obvious. MPEP § 2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, claim 25 is in condition for allowance. Applicant submits that claims 33 and 34 are therefore allowable by virtue of their dependence on an allowable independent claim, as well as by virtue of the features recited therein.

For the above reasons, Applicant respectfully requests withdrawal of the rejections and allowance of these claims.

Conclusion

Given the above amendments and accompanying remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 292-8600.


Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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Todd M. Becker  
Attorney for Applicant(s)  
Registration No. 43,487

Blakely, Sokoloff, Taylor & Zafman LLP  
12400 Wilshire Boulevard, Seventh Floor  
Los Angeles CA 90025-1030  
Phone: 206-292-8600  
Facsimile: 206-292-8606

Enclosures: Facsimile cover sheet  
Transmittal letter, in duplicate